TMR-IF33

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Tourist Model

SPECIFICATIONS

General

Modulation system	Frequency modulation
Carrier frequency	Right 2.8 MHz
	Left 2.3 MHz
Effective range	Up to approx. 9 m (29 ft.)
Frequency response	
	18 – 22,000 Hz
Distortion	Less than 1% at 1 kHz

Transmitter TMR-IF33

Power source DC IN 9V jack accepts:
Supplied AC power adaptor for use on

Where purchased	Operating voltage
U.S.A./Canada	120 V AC, 60 Hz
U.K.	240 V AC, 50 Hz
European countries	220 – 230 V AC, 50 Hz
Other countries	110 – 120 V/220 – 240 V AC, 50/60 Hz

Audio input	Phono jacks/stereo mini jack
Dimensions	Approx. 90 × 203 × 90 mm ($3^5/_8 \times 8 \times 3^5/_8$ in.) (w/h/d)
Mass	Approx. 140 g (4.9 oz.)

Supplied accessories

AC power adaptor (1)
Plug adaptor
(stereo mini jack ↔ stereo phone plug) (1)
Connecting cord
(stereo mini plug ↔ phono plug × 2) (1)
Plastic plate with strap (1)
Screws (2)

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Design and specifications subject to change without notice.

TRANSMITTER

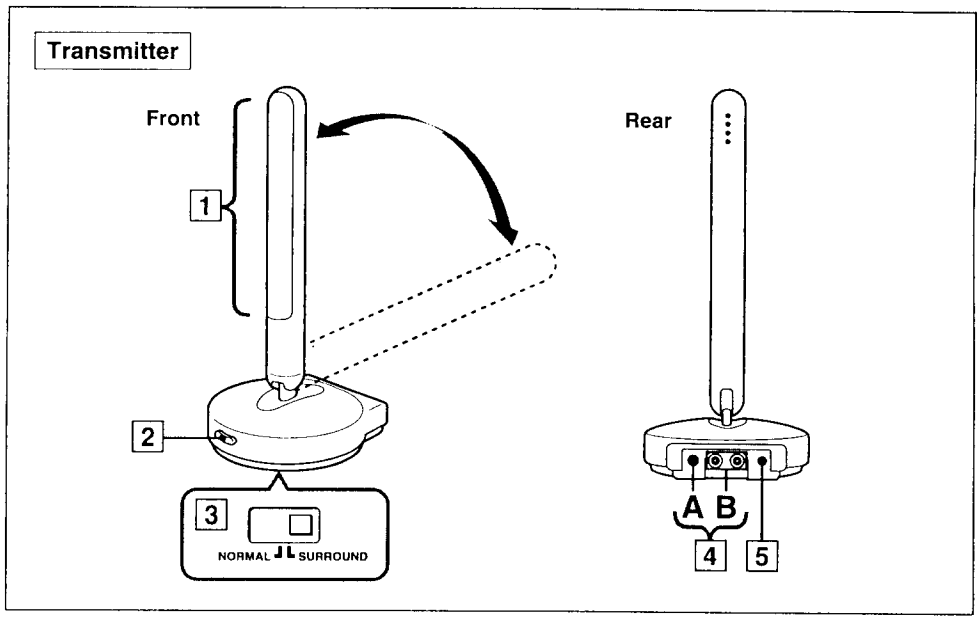
SONY®

MICROFILM

SECTION 1
GENERAL

This section is extracted from instruction manual.

Parts Identification



1 **Infrared emitters**
You can adjust the angle of the infrared emitter part of the transmitter.

2 **POWER switch**

3 **Mode (NORMAL/SURROUND) switch**

4 **AUDIO IN (audio input) terminals**
A: stereo mini jack
B: phono jacks

5 **DC IN 9V (DC external power input) jack**

Flexible Circuit Board Repairing

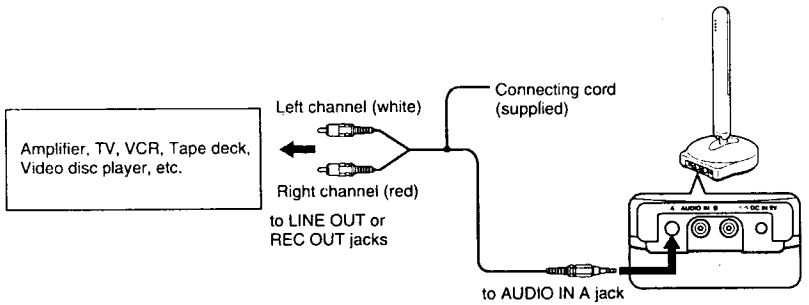
- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

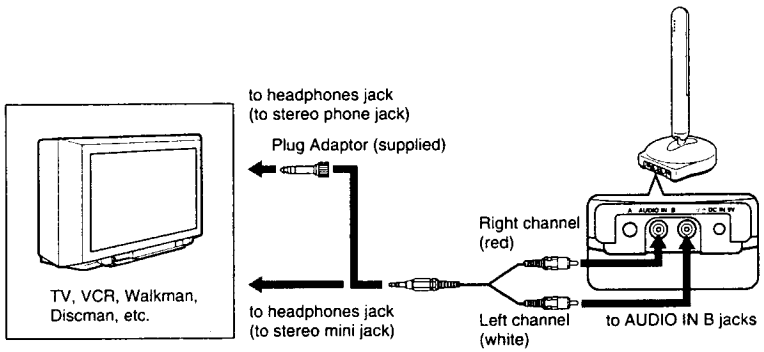
Connecting to Audio/Video Equipment

Connecting the transmitter to the LINE OUT or REC OUT jacks


Amplifier, TV, VCR, Tape deck, Video disc player, etc.
Left channel (white)
Right channel (red)
to LINE OUT or REC OUT jacks
Connecting cord (supplied)
to AUDIO IN A jack

Connecting the transmitter to the headphones jack/earphone (monaural mini) jack

When you connect the connecting cord directly to an earphone jack, the audio signal will not be outputted through the right channel. In such a case, use the separately sold plug adaptor PC-236HG (stereo mini jack ↔ monaural mini plug).


TV, VCR, Walkman, Discman, etc.
to headphones jack (to stereo phone jack)
Plug Adaptor (supplied)
to headphones jack (to stereo mini jack)
Right channel (red)
Left channel (white)
to AUDIO IN B jacks

Do not use the terminals A and B at the same time. If you do so, the audio signals may be mixed. When you use the supplied connecting cord and you wish to connect it to the LINE OUT or REC OUT jacks of the source equipment, connect the other end to the AUDIO IN A jack of the transmitter. If you wish to connect the cord to the headphones jack of the source equipment, connect the other end to the AUDIO IN B jacks of the transmitter.

Optional connecting cords

For connecting the LINE OUT or REC OUT jacks to the AUDIO IN B jacks:

RK-C510KS (1 m)/C515KS (1.5 m)/C520KS (2 m) (phono plug × 2 ↔ phono plug × 2)

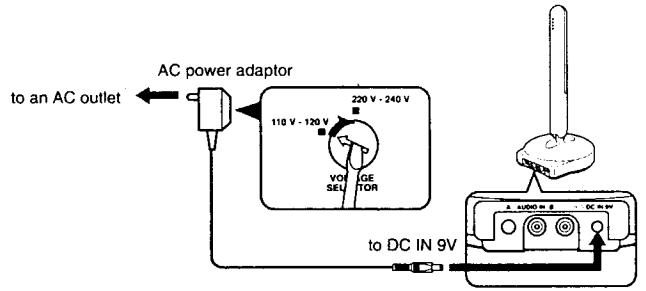
For connecting the headphones jack to the AUDIO IN A jack:

RK-G136KS (stereo mini plug ↔ stereo mini plug)

Optional connecting cord similar to the one supplied to this system:

RK-G129KS (stereo mini plug ↔ phono plug × 2)

Connecting to an AC outlet



Adjusting the Operating Voltage of the AC Power Adaptor

For the customers supplied with the model equipped with the VOLTAGE SELECTOR

Before connecting the AC power adaptor to an AC outlet, check that the VOLTAGE SELECTOR is set to the correct position with the right operating voltage. If not, set it to the correct position with a screwdriver.

Notes on the AC power adaptor

- If the plug of the AC power adaptor does not fit in the AC outlet, use the supplied AC plug adaptor*.
- Use only the supplied AC power adaptor. Do not use any other AC power adaptor.

Polarity of the plug

* Except for Canada, U.K. and Europe models.

SECTION 2
ELECTRICAL ADJUSTMENTS

1. Adjust in the order given.
2. Adjust or measure every channels unless orherwise specified.

TX BOARD

Oscillating Frequency Adjustment

Procedure : No signal state.

1. Short-circuit between TP1 and TP3 (L-ch) or TP1 and TP2 (R-ch).
2. Connect a frequency counter to TP4 (L-ch) or TP5 (R-ch).
3. Adjust with L11 or L51 so that the reading on the frequency counter becomes to the adjusting value.

Adjusting value :

L-ch	L11	2.3MHz ± 2kHz
R-ch	L51	2.8MHz ± 2kHz

RF Level Adjustment

Procedure : No signal state.

1. Connect a osilloscope to TP4 (L-ch) or TP5 (R-ch).
2. Adjust with RV11 or RV51 so that the reading on the oscilloscope becomes to the adjusting value.

Adjusting value :

L-ch	RV11	1Vp-p – 1.1Vp-p
R-ch	RV51	1Vp-p – 1.1Vp-p

3. Remove the short-circuit position TP1 – TP3 and TP1 – TP2.

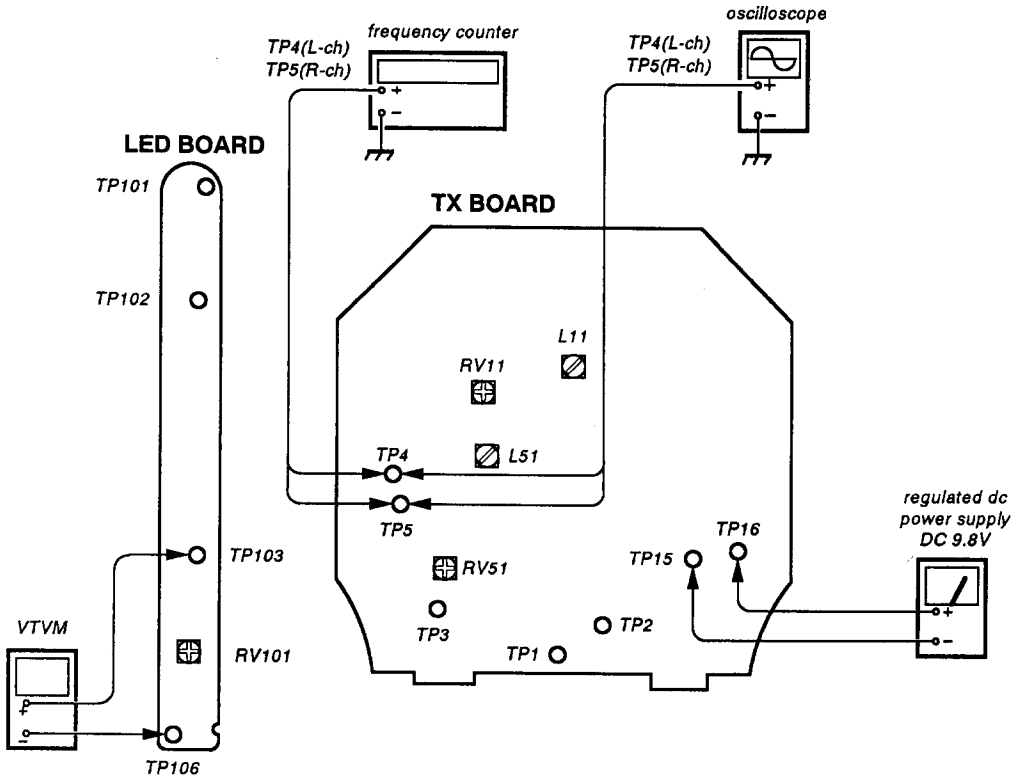
LED BOARD

Bias Current Adjustment

Procedure :

1. Connect a digital voltmeter to TP103 and TP106.
2. Adjust with RV101 so that the reading on the digital voltmeter becomes to the adjusting value.
   Adjusting value : 600 – 650mV.
3. Check the voltage values on TP101 and TP102 become to within the range of the adjusting value.

Connection and Adjustment Location :



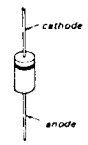
SECTION 3
DIAGRAMS

• SEMICONDUCTOR LOCATION

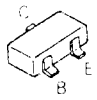
Ref. No.	Location
D1	J - 15
D11	F - 12
D51	G - 9
D101	B - 2
D102	C - 2
D103	D - 2
D104	E - 2
D105	F - 2
D106	G - 2
D107	H - 2
D108	I - 2
D109	J - 2
D110	K - 2
D111	L - 2
D112	M - 2
IC1	J - 11
IC2	F - 13
Q1	G - 14
Q2	G - 14
Q12	G - 11
Q13	H - 8
Q14	G - 6
Q52	H - 8
Q54	I - 8
Q101	C - 1
Q102	B - 2
Q103	E - 2
Q104	F - 2
Q105	H - 2
Q106	I - 2
Q107	L - 2

• SEMICONDUCTOR LEAD LAYOUTS

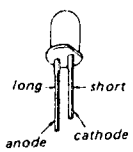
10E2



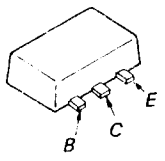
2SA1162
2SC2712-G
2SC2714-Y
DTA114EK
DTC114EK



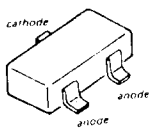
DNP324



2SD999-CLCK



SVC203C



4-1.MAIN SECTION